

In the Claims:

Please cancel claims 1-5 and 15-17 as follows:

1-5. (Cancelled)

6. (Original) A display panel driving method of receiving image signals, a horizontal synchronizing signal and a vertical synchronizing signal, or an enable signal, and then supplying data signals, which are generated from the image signals to change into a positive polarity and a negative polarity, to data bus lines of a display panel, comprising the step of:

storing polarity patterns in a polarity pattern storing portion; and
detecting a polarity of data signals, which are supplied to the data bus lines, in compliance with the polarity patterns read from the polarity pattern storing portion.

7. (Original) A display panel driving method according to claim 6, further comprising the step of:

storing a plurality of polarity patterns in the polarity pattern storing portion; and
detecting the polarity of the data signals, which are supplied to the data bus lines, by outputting only one polarity pattern from the polarity pattern storing portion according to the image signals.

8. (Original) A display panel driving method according to claim 7, further comprising the steps of:

outputting any one polarity pattern of the plurality of polarity patterns from the polarity pattern storing portion, to supply the data signals with the polarity according to the polarity pattern to the data bus lines; and

detecting whether or not the polarity pattern being output from the polarity pattern storing portion is similar to the image signals, to switch the polarity pattern which is output from the polarity pattern storing portion based on a detection result.

9. (Original) A display panel driving method according to claim 8, wherein the step of detecting whether or not the polarity pattern being output from the polarity pattern storing portion is similar to the image signals counts a coincidence number of times between them in a unit time or every predetermined data number, and compares a counted value with a predetermined value.

10. (Original) A display panel driver circuit for receiving image signals, a horizontal synchronizing signal and a vertical synchronizing signal, or an enable signal, and then supplying data signals, which are generated from the image signals to change into a positive polarity and a negative polarity, to data bus lines of a display panel, comprising:

a polarity pattern storing portion for storing a polarity pattern;
a temporarily storing portion for storing the polarity pattern being output from
the polarity pattern storing portion, and then outputting it as a polarity signal; and
a data signal outputting portion for receiving the image signal and outputting
the data signal with a polarity according to the polarity signal output from the temporarily
storing portion.

11. (Original) A display panel driver circuit according to claim 10,
wherein the polarity pattern storing portion stores data of two frame bit number, which
consist of data for the odd-numbered frame and data fro the even-numbered frame which has
inverted logical values of the data for the odd-numbered frame, as a set of polarity patterns.

12. (Original) A display panel driver circuit according to claim 11,
further comprising:
a polarity pattern switching portion for detecting whether or not the polarity
pattern being output from the polarity pattern storing portion is similar to the image signal,
and then switching the polarity pattern which is output from the polarity pattern storing
portion based on a detection result.

13. (Original) A display panel driver circuit according to claim 10, further comprising:

a temporarily storing portion for storing the polarity pattern for one horizontal synchronization period output from the polarity pattern storing portion and outputting it as the polarity signal;

a polarity signal inverting portion for inverting the polarity of the polarity signal in synchronism with the horizontal synchronizing signal; and

a data signal outputting portion for receiving the image signal and outputting the data signal with a polarity according to the polarity signal being output from the temporarily storing portion.

14. (Original) A display panel driver circuit according to claim 13, wherein the polarity pattern storing portion stores plural sets of polarity patterns, while using the data with the bit number for horizontal synchronization period as a set.

15-17. (Cancelled)

18. (Original) A display panel driving method of receiving image signals, a horizontal synchronizing signal and a vertical synchronizing signal, or an enable signal, and then supplying data signals, which are generated from the image signals to change

into a positive polarity and a negative polarity, to data bus lines of a display panel, comprising the steps of:

partitioning a display screen into a plurality of blocks;

calculating a rate of flicker patterns contained in at least one block; and

changing a polarity pattern, which detects a polarity of the data signal supplied to the data bus lines, from a first polarity pattern to a second polarity pattern when the rate exceeds a predetermined value.

19. (Original) A display panel driving method according to claim 18, wherein the polarity pattern is changed into the second polarity pattern when a number of blocks out of a plurality of blocks, in which the rate of flicker patterns is in excess of the predetermined value, exceeds a predetermined value.

20. (Original) A display panel driving method according to claim 18, wherein, after the plurality pattern is changed from the first plurality pattern to the second polarity pattern, the polarity pattern is returned to the first polarity pattern when the rate of flicker patterns contained in the block over a predetermined frame period is less than a predetermined value.

21. (Original) A display panel driving method according to claim 18, wherein partition positions of the blocks are changed frame by frame.

22. (Original) A display panel driving method according to claim 18, wherein the flicker patterns are detected every image signals for at least two pixels which are adjacent in a horizontal direction.

23. (Original) A display panel driver circuit for receiving image signals, a horizontal synchronizing signal and a vertical synchronizing signal, or an enable signal, and then supplying data signals, which are generated from the image signals to change into a positive polarity and a negative polarity, to data bus lines of a display panel, comprising:

an image signal detecting portion for receiving the image signals and then detecting turned-ON picture elements and turned-OFF picture elements;

a flicker pattern detecting portion for detecting whether or not a pattern corresponds to flicker patterns, based on a detection result of the image signal detecting portion;

a dynamic range designating portion for designating a dynamic range;

a flicker information amount detecting portion for calculating a rate at which the patterns, which are detected by the flicker pattern detecting portion as flicker patterns, are

contained in the dynamic range which is designated by the dynamic range designating portion;

a driving mode selecting portion for outputting a signal to decide the polarity pattern of the data signal, based on a detection result of the flicker information amount detecting portion; and

a polarity pattern varying portion for changing a polarity pattern, which detects a polarity of the data signal supplied to the data bus lines, from a first polarity pattern to a second polarity pattern according to an output of the driving mode selecting portion.

24. (Original) A liquid crystal display device comprising:

- (i) a liquid crystal display panel;
- (ii) an image signal detecting portion for receiving the image signals and then detecting turned-ON picture elements and turned-OFF picture elements;
- (iii) a flicker pattern detecting portion for detecting whether or not a pattern corresponds to flicker patterns, based on a detection result of the image signal detecting portion;
- (iv) a dynamic range designating portion for designating a dynamic range;
- (v) a flicker information amount detecting portion for calculating a rate at which the patterns, which are detected by the flicker pattern detecting portion as flicker

patterns, are contained in the dynamic range which is designated by the dynamic range designating portion;

(vi) a driving mode selecting portion for outputting a signal to select the polarity pattern of the data signal, based on a detection result of the flicker information amount detecting portion; and

(vii) a polarity pattern varying portion for changing a polarity pattern, which detects a polarity of the data signal supplied to the data bus lines, from a first polarity pattern to a second polarity pattern according to an output of the driving mode selecting portion.

25. (Original) A liquid crystal display device according to claim 24, further comprising:

an exception pattern detecting portion for detecting patterns, which are to be excepted from the flicker patterns, from the patterns which are detected by the flicker pattern detecting portion as the flicker patterns.